

MICHIGAN FARMER.

Devoted to Agriculture, Horticulture, the Mechanic Arts, and Rural and Domestic Affairs.

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Perfect Agriculture is the foundation of all Trade and Industry.—Liebig.

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Letter from the Editor No. IX.

NILES, May 21, 1849.

Getting into the cars at Ann Arbor, we found ourselves thrown into the midst of acquaintances and friends from different, and some of them from distant parts of the country. And through them we had the pleasure of making the acquaintance of many other persons, and the number was so multiplied through our own impertinence, as some would call it, that instead of that dull and tedious monotony so much complained of by persons riding in the cars, the time passed pleasantly and too quickly away, and gladly enough would we have kept on another hundred and fifty miles; and if Whitney's great rail road project across the rocky mountains had been accomplished, we are quite certain we could have gone the whole length of it, and when set down upon the shores of the Pacific, have regretted, that it did not belt the globe.

It is a real luxury to be permitted thus to extend one's acquaintance with the great family of man, to mingle with and link ourselves, as extensively as possible, to a race of beings so interesting, to whom we sustain a common relationship, and who are all, in common with us, passing on, with more than railroad speed, "to that bourne whence no traveller returns."

And to see one whose figure and shape manifestly entitle him to be classed with this race of beings, getting himself stowed away in a railroad car, or on a steamboat, all alone in the midst of a crowd, as perfectly so as though he were the only person on board, putting on airs of mighty self consequence, as though he belonged to another order of beings, or shrinking away from contact with others with the recoil of a misanthrope, or gazing about in stupid vacancy, or snoozing away his time in listless indifference, just as if he sustained no relationship to, and felt no interest in, the great brotherhood of man, beyond the little spot which he calls his home, where he lives, "vegetates," dies and rots.—O it is enough to make one drop the tear of compassion over the frailties of his race!

Never did we approach a member of the human family with civility any where, though we had never seen his face before upon this earth, without meeting a kind and friendly response, and, whether he were high or low, very seldom without feeling ourselves elevated in the scale of being by new accessions to our stock of intelligence, and by the impulse thus given to all the better feelings of the heart.

And how preposterous is the idea which many seem to act upon, that a man must sit like a stock in a crowd of strangers, and never speak to a brother man, because he has not been taken through a regular course of introduction. Away with this relic of a barbarous age! And here we cannot but express our abhorrence of the mode of self-introduction which is practiced in some parts of the south, and west—farther west than Michigan. It consists in accosting an individual as a stranger, and calling him such. "Well, stranger," &c. &c. to the end of the chapter. O horrible, thus to accost a brother man! Never were we thus accosted, but it struck a chill through our very soul, and made us sick of earth—and if we were to meet an inhabitant of the moon in the loneliest corner of that lonely orb, and he should accost us thus, we should recoil from him with a shudder, and if we had wings we would fly away—indeed we would.

Among our fellow passengers were gentlemen from different and distant states of the Union, from Vermont, from Connecticut, from New York, from Maryland, from Pennsylvania, from Virginia, from Kentucky, from Ohio, from Illinois, from Wisconsin, from Minnesota, and from Michigan, and from how many others we know not, the acquaintances we made being limited to the states above named, only twelve in number, including one territory, and we may add Canada besides, which we will "throw in" if you will believe the rest.

The Wheat Crop. From all parts of Michigan we continue to have favorable accounts. From Ohio, Illinois, and Wisconsin, the accounts are equally favorable. In Kentucky, the crop promised well, but was

so forward as to be cut down and greatly damaged by the cold weather in April, so much so that much of it was turned under. From Maryland, Pennsylvania, Virginia and New York, the accounts are, on the whole, rather unfavorable, unless it be in particular localities. In those states much of the crop was winter-killed, and it has also suffered from dry, cold weather. The above list embraces about all the great wheat-growing states in the Union. There were several "Kanucks" on board who represented the wheat crop in Canada, throughout all the wheat districts, as being more promising than they had ever known it.

Hemp culture in Kentucky. Among our new acquaintances were three gentlemen from Kentucky, one of whom, (whose name is Meeker) is a newly appointed Supreme Judge of Minnesota, a real clever, open-hearted Connecticut yankee, who has resided in "Old Kentuck" about twelve years. He is a shrewd observer and a good thinker, and of course edifying in conversation. He gave us some information in regard to the culture and preparation for market, of the hemp crop, the great staple of Kentucky, which quite surprised us. He says there are men in Kentucky who raise five hundred acres of hemp per annum. To cultivate and harvest that number of acres requires about one hundred hands, and of course one hand will manage about five acres. The crop is harvested with a hook which cuts it down near the surface of the ground, or, if it stands thick and fine and not remarkably tall, it is cradled. A stout hand will cradle an acre a day. An acre will produce forty or fifty dollars worth of hemp, the price being generally about sixty dollars per ton. But what surprised us most, was the facility with which it is prepared for market. It may be recollected, that we have heretofore published some account of a machine which was said to do wonders in breaking and cleaning hemp and flax. The performance of the machine was represented as being so extraordinary, that we made many grains of allowance in our own mind. But its performances seem even to transcend the representations which have

been given of them. It breaks, cleans, and packs, or bales the hemp, all by one operation, and with astonishing dispatch, doing it as fast as the bundles can be put into the machine by one man—as fast as bundles of wheat are passed through a common thrashing machine.

And why not introduce it here? Why can we not raise as good hemp on our prairies and on our rich bottom lands, as they can raise any where—and with the help of this machine why can it not be made as profitable a business here as any where? Would it not be far better to place our dependence upon a greater variety of crops for market, than to rely upon a single staple, and that so frail a thing as the wheat plant—a plant which is liable to more fatal contingencies than perhaps any other, and by the frequent failure of which the whole community is thrown into pecuniary embarrassment.

And flax, why can we not raise it, and manufacture, at least, our own linen? If it can be cradled, as no doubt it can, and if it can be prepared for market with the machine above mentioned, what hinders our going into the cultivation of this vegetable product? The seed alone would pay all the expense of cultivation and a profit besides. Why then may not this be made a profitable business among us? Hitherto there has not, we believe, been a linen manufactory in the United States. Accounts have recently been published, however, of the formation of a company at the east, with a heavy capital, for the purpose of establishing one, and they propose purchasing the flax from the farmer, and cleaning it themselves, undoubtedly by means of the above mentioned machine.

Slave property. Slave property in Kentucky appears to be getting very unsafe. The gentleman above spoken of, remarked, that sixty slaves bid adieu to Kentucky the day before he left. We inquired if they were followed, and he said, no, for it was of no use, as they were safe as soon as they got across the river into Ohio. The question is to be settled next winter, whether an emancipation clause shall be incorporated in the new constitution of that state.

Agriculture in Vermont.—*The West against the East.* We were so fortunate as to be introduced by a friend to a very intelligent gentleman from the Green Mountain state, whose name, we regret to say, has passed from our memory. He has been engaged for years in the purchase of pro-

duce in that state, as wool, butter and cheese, &c. But he remarked, that the farmers there were fast abandoning wool-growing, and turning their attention to dairying, because they cannot compete with the west. He said he was through this country eight years ago, and that when he returned to Vermont, he told the farmers there, that they might as well give up the wool business at once, for they would soon be compelled to do it by the west. He expressed it as his opinion, that wool raised at the west would pay a better profit at twenty-five cents a pound, than that produced at the east at thirty-seven and a half cents a pound. A gentleman from Connecticut made the same remark in relation to the decline of wool-growing in that state.

Other matters. The gentleman from Vermont above spoken of, made some very shrewd remarks about matters and things in general, and some things in particular, from which a profitable lesson may be sifted out. He spoke emphatically of the perfect moral rectitude with which all business transactions were characterized there, the slightest variation from which deprives a man of the confidence of community, and his standing in society. A man there might almost as well be hung as to be called a cut-throat, and as a character for integrity and perfect uprightness and promptitude in all transactions between man and man, is the only passport to a standing in society, every man's first care is to establish such a character, and nothing inflicts a keener pang upon his sensibility than even an insinuation against it. He did not say, that he intended his remarks as a back handed thrust at the renegades of the west, who, having broken loose from the wholesome restraints of eastern society, had repudiated the lessons they had learned in their early years, and were miserably deceiving themselves with the delusion, that they had placed themselves upon a higher because a more liberal platform, when in fact, every step they had taken, had been downwards—he did not say this—he was too much of a gentleman for that—but we may very well understand his meaning.

He spoke of the air of comfort and thrift which characterized every man's dwelling. The farmers there, by a long and persevering course of industry and economy, had risen to independence—were clear of debt, and had money to lend, and when they went to the store, they generally went with the money in their hand, and bought goods

where they could get them the cheapest for cash. When you came to a farmer's residence, you would find a two story house, neatly painted white, with green blinds, with wood-house and out-houses all complete, and the whole enclosed by a neat fence, and surrounded with shrubbery, shade trees and fruit trees, and everything to make life comfortable and happy. And as you pass along to the next house, you find it just so too, and so on to the next, and the next, and the next, until you begin to think there is no end to the comfort and happiness which reign among the farmers of Vermont.

Letter from the Editor. No. X.

BERTAND May 22, 1849.

We are now upon one of the finest tracts of land in the state of Michigan or any other state, being some six or seven miles West of Niles, upon the Chicago road. Just about here there is an alternation of prairie and burr oak openings. Portage prairie lying a little to the South, reaches up its arms, at different points, causing the alternations above spoken of. The soil, is a dark, deep, sandy loam, intermixed with gravel, and is remarkably fertile. There are some of the finest farms in this neighborhood we have seen any where.

Mr. Kennedy's Farm.—Among the many beautiful, extensive and well managed farms, which are to be met with in this section of country, there are two which deserve particular notice. One of them is the farm of James Kennedy Esq. on which there are not far from three hundred acres of improvement. This farm is kept in a high state of cultivation by clovering. There is now upon it the most magnificent field of wheat we have seen this season in the state, containing one hundred and forty acres. Every acre of it was clover sod, which was turned under and the wheat sown directly upon it. If nothing befalls it, and it yields as well as it now promises, it will average at least twenty-five bushels to the acre, the whole field over, which will make three thousand five hundred bushels. There is no telling, however, what a wheat crop will be, until it is in the granary. The present season, Mr. K. is summer-fallowing his clover fields, and designs to plow them the second time before seeding, so that he is in a fair way to settle the question, whether once plowing or twice is the best. Mr. K.'s son remarked, that they had used plaster, but it did more hurt than

as it made the clover and timothy so stout, that it all lodged down. without plaster a great portion of it. The clover on the field of wheat mentioned, after having been passed all summer, was very stout and rank and turned under. He remarked that he preferred clover as a better manure for even than that from the barn-yard. Mr. K. has a barn which well befits such a farm. It is 75 feet by 78. There are two floors to it, and three places of entrance, with a basement story open on two sides for sheep and cattle. In this basement is also a stable 75 feet long. In the barn is an abundance of room for a thrashing machine and horse power of the largest kind, so that the thrashing may be done in all kinds of weather, and all will be secure. It cost about twelve hundred dollars.

In the barn we found a clover mill which interested us much. It is a patent machine, occupying but little space, and hulls out four or five bushels an hour, so that passing it through a fanning mill it is completely cleaned. It is operated by a common horse power. Mr. K. transfers to the horse power of his thrashing machine whenever he has occasion to use it. The machine itself cost \$75.00.

And surely, the reader may well exclaim here is a happy man on earth; one who has reason to be contented with his lot. The man is Mr. Kennedy. With such a farm in his possession, and free from debt, what could he desire more? What then would be your surprise to be told, as we must tell you, that Mr. K. is on his way to California in quest of gold, having left his farm in the care of his sons.

Mr. Howe's Farm.—Adjoining the farm of Mr. Kennedy is that of our friend F. Howe, whose hospitalities we are now enjoying. On which there is also about three hundred acres of improvement. Mr. H. has a very neat and tasteful dwelling, and the garden and flowers which ornament the yard, evince the taste for rural scenery of the female portion of the family. In his eye, however, the most attractive object is a hundred acre field of wheat, which spreads itself out upon the opposite side of the road, every acre of it in full view from the piazza of his house, and we must confess that it is a spectacle delightful to behold, for it is a splendid field of wheat.

And we are sorry to say of our friend Howe, that he too came very near being

carried off by the California fever. At the age of 62, having already such a farm as this and much more in possession, located in the very garden of the state, surrounded with all that can make life pleasant and happy, what could he desire more? And yet, he had gone so far as to make full preparation, even to the knitting of the last stocking, and was on the very point of starting, when he was prostrated by disease, and compelled to give it up.

Mr. Howe has recently procured one of Palmer's grain drills, which is quite an interesting affair to us, and we have no doubt it will well pay the cost. He commenced using it this spring, having only put in his oats with it, and of course is not yet able to speak of its advantages.

There is not perhaps a finer tract of country in the state of Michigan than that which extends from Niles to this neighborhood, and on through Portage, Terracopia, Rolling and Door Prairies, the two former lying partly in Michigan, and partly in Indiana, and the two latter in Indiana, upon the last of which the flourishing village of La Porte is situated. Terracopia appears to be "the height of land," the streams originating in a marsh, lying upon it, passing off in one direction, through the Kankakee and the Illinois, into the Mississippi, and in the other, through the St. Joseph into Lake Michigan.

We regret to learn, however, that upon the above beautiful prairies, the wheat is badly winter killed. We heard nothing of any such calamity to the wheat upon the prairies north, in Kalamazoo County. The injury to the crop from this cause, is said to be confined to those prairies which are clayey, to which class those above mentioned belong.

It was getting to be quite dry here, and the crops were beginning to show the effects of it, but last night a refreshing rain fell, and this morning all nature looks glad.

The rage for mammoth weeklies. Our readers will doubtless remember, that we have, from time to time, had the temerity to speak rather disrespectfully of the mammoth weeklies published in our eastern cities, and which come swarming, like the locusts of Egypt, over the whole West. Nothing less would satisfy the gullibility of large masses of our farming population, these papers were so large and so cheap. A great effort was made to get up a monster list of one of these monster papers published in the monster city of Philadelphia, in a

little town hereabouts, with a view to secure the premium. Well they did wonders, having succeeded in raising a list of 75 subscribers in a town which does not poll more than a hundred votes, and away it was sent, post haste, to the great city of Philadelphia, and in due time the monster made its appearance in these "diggins"—a truly magnificent affair, big enough to cover the side of a house—almost. And now, a sicker set of fellows we never saw. They curse the paper, "up hill and down," and propose to send on a petition to the publishers to send them the blank paper instead of the printed sheet. They say they have been gulled. Indeed! Gulled by whom? The postmaster, who was mainly instrumental in getting up the list, and who is a real fine fellow, says that he has been gulled too? It seems, that one or two copies had been taken by certain individuals in the neighborhood last year, upon whose representations of its merits, and at whose solicitation, he was induced to embark in the enterprise; but he is thoroughly ashamed of it. Who will believe, that the paper spoken of above, is the far famed American Courier, which we believe is regarded as one of the best of its class. It is certainly ominous of good that the eyes of the people are opening to the worthlessness of such trash, and that as moral and intellectual beings, they should feel indignant at the imposition. They seem to be all of one mind upon the subject.

22 We invite attention to the communication upon another page, on the application of chemistry to agriculture, suggesting that the analysis of soils &c. be made a part of the duty of the Professor of Chemistry in the University. It is from the pen of one of our most scientific men, and one who has done as much to advance the interests of the University, as any other man in the state.

23 Two or three communications, together with sundry editorial letters, are necessarily laid over.

24 Our subscribers who are in arrears are requested to forward the amount of their subscriptions with as little delay as possible.

Each one may suppose, that the trifling amount of his subscription would add very little to our means, if forwarded. And suppose each one of all our subscribers are of the same opinion, what then? It is well to think of these things.

Prospects of the Next Clip.

The Wool-Grower contains a communication, over the signature R. L., on this subject.

In regard to the prospect of the "next clip," in Maine, we can tell him it will be a *very small* one.

The sheep have *departed* from our borders. We know of some neighborhoods where a few year ago, you could find a thousand sheep; now you will not find enough there to supply sufficient wool to make stocking yarn to furnish that same neighborhood.

We can take you into a town where, a few years ago, the woolen factories were buzzing night and day, and giving profitable employment to hundreds of industrious hands; now the spindles are rusting in idleness, and the workmen dispersed. Even those mills that are in operation, turn slowly and every revolution of the wheel mourns dolefully of hard times.

Such is the prospect of the "next clip" in Maine. These are facts. We say nothing of the causes.

The writer above alluded to estimates, from the statistics and other data of 1840, that there will be, in 1850, thirty millions of sheep in the United States, and that the clip of that year will be seventy millions of pounds, and that the clip of this spring (1849) will be *sixty-six millions* of pounds. He thinks not over one fifth of this will be worked up at home, and that there will be therefore, upwards of *fifty-three millions* for the manufacturer.

In remarking upon this statement, the editor thinks that the old stock of wool will be pretty well worked up; that the imports will be about fifteen millions of pounds, or say twenty millions. This with the clip, deducting what will be worked up at home will give seventy millions to the manufacturer. He then estimates the number of woolen factories in the United States at fifteen hundred; and allowing only two "sets" of machinery to each factory, they will require *two hundred and twenty-five thousand* pounds per day. They will thus work up *sixty-eight millions* during the year, thereby leaving a surplus of two millions "for *lee-way and variation*," as a sailor would say.

According to the above calculations, it is probable that the clip will all be wanted at home; but the price, as every one knows, must depend upon the price of fabrics, and the condition of the money market.

Without trenching upon political ground we presume we may be allowed to say, that it is unfortunate that the price of the fabric is regulated by the agents of the English manufacturer. Instead of having a home valuation to be attached to foreign fabrics which pay an *ad valorem* duty,—that is, a duty according to its value,—the value is sworn to by foreign agents as it is in *their country*, not in ours; and abundant experience proves that they consider a custom-house oath a mere farce, and the taking of a false one there, the least heinous

and most pardonable of all mortal sins.—*Maine Farmer.*

Power of the Soil to Absorb Odors.—

It is well known that onions, if buried in the earth for a few days previous to being cooked, will have lost much of their rank flavor. Wild ducks, which are often too fishy in flavor to be good, may be rendered much more palatable by being wrapped in absorbent paper and buried in the ground for a few hours. Dried codfish loses much of its austerity of flavor (if we may coin a term) by similar treatment. During the plague in Europe, clothing was often buried for a time to disinfect it. This absorbent property of the soil is due to the presence of carbonaceous matters; for clean sea-beach sand will produce no such results, while pulverized charcoal will act with much greater energy than common soil. On this principle, animal matters coated with unleached ashes, and then buried in pulverulent peat or muck, will not only decompose without giving off, offensive odors, but the muck will also, by absorbing the resulting gases arising from decomposition, be rendered highly valuable as a fertilizer. Dr. Dana says that a dead horse, if cut in pieces and treated as above, will render twenty loads of muck equal in quality to the best stable manure.—*Working Farmer.*

Rules in Raising Poultry.

1. All young chickens, ducks, and turkeys, should be kept under cover, out of the weather, during rainy seasons.
2. Twice or thrice a week, pepper, shallots, shives, or garlic should be mixed up with their food.
3. A small lump of assafetida should be placed in the pan in which their water is given them to drink.
4. Whenever they manifest disease, by the drooping of the wings or any other outward sign of ill-health, a little assafetida, broken into small lumps, should be mixed with their food.
5. Chickens which are kept from the dunghill while young, seldom have the gapes; therefore it should be the object of those who have the charge of them, so to confine the hens as to preclude their young from the range of barn or stable yards.
6. Should any of the chickens have the gapes, mix up small portions of assafetida, rhubarb, and pepper, in fresh butter, and give each chicken as much of the mixture as will lie upon one half the bowl of a small teaspoon.
7. For the *pip*, the following treatment is judicious: Take off the indurated covering on the point of the tongue, and give twice a day, for two or three days, a piece of garlic the size of a pea. If garlic cannot be obtained, onion, shallot, or shives will answer; and if neither of these be convenient, two grains of black pepper, to be given in fresh butter, will answer.
8. For the *snuffles* the same remedies as for the gapes will be found highly curative

but in addition to them, it will be necessary to melt a little assafetida in fresh butter, and rub the chicken about the nostrils taking care to clean them out.

9. Grown-up ducks are sometimes taken off rapidly by convulsions. In such cases four drops of rhubarb and four grains of cayenne pepper mixed in fresh butter should be administered. Last year we lost several by this disease, and this year the same symptoms manifested themselves among them; but we arrested the malady without losing a single duck, by a dose of the above medicine to such as were ill. One of the ducks was at the time paralyzed, but was thus saved.—*Selected.*

From the Michigan Christian Herald. Normal Schools.

The experience of a few years has satisfactorily tested the usefulness of Normal Schools—or schools for the education of teachers. The first experiment in this country, in regard to these institutions, was made by Massachusetts.—In 1838 a gentleman in Boston proposed to give \$10,000 to be expended by the Board of Education in an experiment upon these schools provided the state would add to it a like sum. The proposal was agreed to, and \$20,000 were put into the hands of the Board, to be devoted to the founding of teachers' seminaries. In July 1839 a Normal school was commenced at Lexington, Mass., and another at Barre, in September following. A third was opened at Bridgewater, in September, 1840. The results, we think, have been to extend and deepen the conviction of their utility. Close upon these efforts in Massachusetts, New York established a similar school at Albany, and the Empire State for years past, has pointed with pride to this as one of the most prominent of her institutions. Other states have followed these examples, and last, though not least, Michigan has passed an act establishing a Normal school. This institution is to be under the direction of a Board of Education, of which the Lieut. Governor and Superintendent of Public Instruction, are to be members, *ex officio*, and three others are to be appointed by the Governor and Senate. Twenty-five sections of the Salt Spring lands have been appropriated for the benefit of the school.

The common schools—"the people's seminaries"—are the agencies which must exert the widest and most controlling influence upon the character and destiny of our country. It concerns every member in society to know the character of those into whose hands is to be committed the moral, intellectual, and physical training of the rising generation. Suitably qualified teachers we must have; but to obtain them we must not establish a beggarly standard of compensation. It should be such as would stimulate the best minds to seek a qualification for the work, not as a temporary expedient, but as a profession.—And where the motive to commence such a preparation is adequate, we know not what better facilities can be afforded to qualify men and

men for the responsibilities they contemplate, than teachers' seminaries.

The gentleman who, with the officers mentioned, constitute the Board of Education, are Sam'l Barstow, Esq., Rev. Samuel W. Berry, and Hon. Randolph Manning. Early, and not unimportant responsibilities devolving upon the Board, will be to decide upon a location for the institution. We doubt not that the wisdom of the Board will enable them to make such a selection will "subserve the interests of the state."

An Essay on Draining.

BY JOHN WILKINSON,

Principal of Mt. Airy Agricultural Institute, Germantown, Pa.

For which the Com. of the Maryland State Agricultural Society recommended that a Premium be awarded.

Ordered by the Board of Managers to be published in the American Farmer.

The writer respectfully submits the following essay to the committee on essays of the Maryland State Agricultural Society, hoping that it will not be uninteresting, although it may have no claim to the prize offered by the Agricultural Society.

That the principal advantages of thorough judicious drainage are quite generally understood and appreciated, I have not doubt, but, the opinions generally entertained relative to the necessary expense of the proper construction of the various kinds of drains in use in this country, being so grossly erroneous, it will render the usefulness of a thorough, replete practical essay on this subject, in point of interest and value, paramount to one on any other practical branch of modern agriculture. There is no branch of more general or universal interest, nor any that seems so infinite in its immediate adaptation to the wants of the producer. Its value is not confined to any locality, or its benefits peculiarly adapted to the necessities of any particular set of culturists, but it is of equal interest to the tiller, in the frigid, temperate or torrid climate. In this country, no state, no country, no town, plantation or farm can be said to be beyond the reach of its universal adaptation.

In the culture of the cereals, the grasses, roots and fruits of every description, tobacco, cotton, and even that semi-aquatic staple of the south, (rice,) its advantages, if a judicious system be practiced, are most obvious on portions of almost every plantation or farm.

Draining is now allowed to hold the first place among the mechanical methods by which those changes are to be produced upon the soil, that are to fit it for the better growth of valuable crops.

In all localities, the following desirable results of an efficient drainage of the land may be confidently anticipated, viz: the removal of all putrid stagnant pools of water; a ready escape given to the excess of water that falls in rain; subsoil waters that would prove injurious on the surface, arrested in their ascent, whether by capillary action or by the force of springs; the surface soil

preserved from undue moisture; substances noxious to cultivated vegetation which frequently linger in sub-soils, either neutralized or effectually eradicated, and additional vigor or energy imparted to the vegetable products, by supplying proper vegetable aliment to the soil, whether from natural or artificial sources.

When this desirable state of the soil is once affected, it constitutes a most important and permanent improvement, and one which can be produced by no other available means: its presence, however, will depend on the manner in which the drains are constructed, and the order in which they are kept. If by neglect, the drainage is more or less impaired, the original state of the land, will again gradually return.

In soils which are thoroughly drained and rendered properly porous, there is a constant descent of fresh water through them, which causes a similar constant descent of fresh air through the pores, from the surface to the entire depth to which it is mellowed and drained. When the rain falls, it enters the soil, and more or less displaces the air which is contained in its pores. This air either descends to the drains, or rises into the atmosphere. When the rain ceases, the water, as it sinks, again leaves the pores of the soil open, and fresh air consequently follows.

It is, as it were, drawn in after the water, as the latter gradually passes down to the drains: thus, where a good drainage exists, not only is the land refreshed by every shower that falls—not only does it derive from the rains those important substances which occasionally, at least, are brought down by them from the atmosphere, and which are in a great measure lost where the waters flow over the surface—but it is supplied also with renewed accessions of fresh air, which experience has shown to be so valuable in promoting the healthy growth of all cultivated crops.

[To be continued.]

Flax.—The attention of farmers in one of the agricultural districts in Maine, has lately been turned to the cultivation of flax in consequence of an offer on the part of some capitalists to establish works in the neighborhood for rotting and dressing the flax. One condition on which the promise to establish such works was based was, that the farmers should agree to sow not less than one hundred acres. These works promised to pay twelve dollars per ton for the straw. Another inducement for its cultivation is a guaranty that the seed will readily sell for a dollar a bushel.

We do not know at what price the straw could be sold for in this valley. It would certainly be a valuable material for making paper, and a farmer at our elbow says that five dollars per ton for it would pay well. The seed would meet a ready sale in St. Louis in any quantities at a price varying from eighty-five cents to one dollar per bushel. The demand for linseed oil is very great, and is every year increasing; and

a gentleman of this city, who consumes a large amount annually in the manufacture of white lead, assures us that the manufacture of linseed oil in this city is a profitable business, and would be much more so if the amount of flax seed brought to this market was great enough to permit the manufacture of oil on a much more extended scale.

Will some of our agricultural brethren give us their experience in flax growing—its cost, its product in seed and straw and the expense of rotting and dressing? If the straw was dressed for the use of paper-makers only, it would require no very complicated or expensive machinery.—*Valley Farmer.*

Grubs in Cattle.—These grubs are undoubtedly the larvae of the gadfly (*astrus bovis*.) This fly, which somewhat resembles a small bumble-bee, deposits its eggs in the skin of the backs of cattle during the latter part of the summer; and these worms or grubs, live during winter in or under the skin, causing bunches or lumps easily felt by the hand outside, and, when at all numerous, injuring the health and growth of the animal. Each of these bunches will be found to have a small opening, to admit air for the insect, or to allow matter to escape. We know of no way to destroy these vermin but to extract them by hand, squeezing them with the thumb and finger, and aiding their exit with the point of a knife. When the orifice is well open, a drop of turpentine will do the work more easily. In no case should they be allowed to remain long after their presence is discovered.—*Ohio Cultivator.*

Machine for Drying Wheat.—A machine is being built at the foundry of Messrs. Gates & Hoge, which will be found very useful in cases of vessels wrecked with wheat on board which can be rendered fit for market by the process which it can be subjected to. The wheat will be thoroughly dried by passing through cylinders heated by steam, and will not be scorched or at all injured, but will come out as good and fresh as new. Several thousand dollars will thus be saved in the case of the cargo of the brig Ariel, which is to be subjected to the process of drying by this machine.—*Chicago Democrat.*

Choked Cattle.—Remedy.—Take any kind of tube, say an elder or quill, and fill it with gun-powder. Open the mouth, hold out the tongue, put the tube as far down as convenient, and blow the powder from the tube into the throat. It will relax the pipe and suffer the obstruction to pass on. Try it. D. S. BUFFINGTON.

Hinmanville, March, 1849.

The Beet Root was first brought from the shores of the Tagus, and was cultivated in gardens, on account of its elevated leaves and the rich red color of its roots, two hundred years before it found a place on our tables as an esculent luxury.

HORTICULTURAL.

J. C. HOLMES, EDITOR OF THIS DEPARTMENT.

Fruit Trees.

Having observed the fruit trees in Detroit and vicinity, and made pretty extensive enquiries concerning their present appearance throughout the state; we have come to the conclusion that there is now an indication of a full crop of apples, pears, cherries, plums and quinces, and about one half our usual crop of peaches.

Apricots in sheltered situations in this city were in full blow on the 30th April. Peach and cherry, on the 8th May. Plums, currants and strawberries on the 10th. Apples and pears on the 17th, and quinces on the 24th.

We have never seen the apple, pear, cherry, and plum trees, more completely loaded with blossoms than they were in the vicinity of Detroit at the dates given above.

From Washtenaw county, we learn that the severity of the winter has killed many of the plum trees. From Kalamazoo, that, in some situations, the cherry, quince, and pear on quince stocks, are killed. From Lenawee, that, to a passer-by, the apple-trees present a healthy appearance, and give promise of a full crop of fruit; but, upon a close examination, the bark appears soft and loose, and if cut into, it is found to be dark and indicating decay. Although the degree of cold was at times, during the past winter, much greater than we usually experience in Michigan, we do not attribute the loss of fruit trees solely to this cause, but more particularly to the quantity of water in which the roots have been immersed for a long time.

It will be recollected that, from the 4th of July last to the middle of December, rain fell almost daily, causing more or less injury to hay, every kind of grain, potatoes, &c. At no time between the 4th of July last and the 15th of May has the surface of the earth in any part of Michigan been dry. Last fall our roads were almost impassable. This spring the ground has been so completely saturated with water, that people have found it very difficult to plow until within a few days. Consequently, fruit trees that stood where the water did not drain away from the roots must be injured, if not entirely destroyed. Peach trees are oftener killed in this country by water standing about the roots, than by severe cold weather.

We notice in a late Allegan Record a stirring appeal to the people of Allegan Co. by Hon. H. H. Comstock, in reference to the interests of the State agricultural society.

Detroit Horticultural Society's Exhibition.

The Detroit Horticultural Society held its first exhibition for the season on Wednesday, 23d of May.

Mr. J. Ford exhibited a very large and splendid collection of greenhouse plants; also, Victoria rhubarb and asparagus.

Mr. Wm. Adair exhibited some beautiful specimens of pelargonium and roses in pots.

Mr. J. Dougall, of Amherstburgh, exhibited one hundred varieties of tulips and twenty varieties of polyanthus.

Miss Mary S. Palmer exhibited a large and rich bouquet of cut flowers.

Mrs. H. Hallock exhibited a large and beautiful bouquet.

Hon. B. G. Barker, of Plymouth, exhibited several specimens of apples from the orchard of John C. Welsh, Esq., of Plymouth; also, some large ears of corn raised by himself, and which he names Westchester corn, he having received the seed from that place.

Messrs. Hubbard & Davis, of Troy, exhibited 12 varieties of apples, all in a good state of preservation.

A great variety of horticultural implements were exhibited by Messrs. Sprague & Co., of Detroit.

For the Michigan Farmer.

Detroit Horticultural Society.

The committee appointed at the last meeting of the Detroit Horticultural Society to report upon the number of exhibitions for the current year, the time when they shall be held, and a schedule of fruits, plants and vegetables for which premiums shall be awarded—

REPORT:

That there be four exhibitions held by this Society for 1849.

The first exhibition be upon the 23d day of May.

The second exhibition in June.

The third " August.

The fourth " "

For the May exhibition the premiums to be honorary.

For the June exhibition there be appropriated the sum of twenty-five dollars, to be awarded as follows:

FOR FRUITS.

For best quart of strawberries,	\$1 00
2d best,	75
3d "	50
best quart of gooseberries,	50
2d best,	25
best quart of cherries,	75
2d best,	50
best collection of currants,	50
" " fruits,	1 00

FOR VEGETABLES.

best brace of cucumbers,	\$0 50
" 6 heads of lettuce,	50
" half peck of new potatoes,	50
" " green peas,	75
" three bunches rhubarb,	75
" " asparagus,	50
" six blood beets,	50
" half peck seed onions,	50
" collection of vegetables,	1 50

FOR PLANTS.

best rose in pot,	50
" pelargonium,	50
" fuschia,	50
" collection of roses,	1 00
" " pelargonium,	1 00
" " fuschia,	1 00
" " cut flowers,	50
" " wild "	50
" " bouquet,	50
" floral design,	1 00
" collection greenhouse plants,	2 00

Where cabbage plants are infested with a small black insect that is destroying the leaves, scatter lime upon the plants early in the morning, while the dew is upon them, and the insects will leave at once.

For the Michigan Farmer.

Asparagus.

FENTONVILLE, MAY 19th, 1849.

Mr. Editor—Being one of the subscribers to your valuable paper, and deriving much pleasure and knowledge from its perusal, I consider it my duty to advise you of the success I have met with this year in raising that delicious vegetable asparagus; and in so doing, besides being gratifying to myself, add a mite to the general intelligence of your journal.

I have an asparagus bed in my garden, situated along the fence, with a south aspect, and being about 130 feet long by 2 wide. It has been planted 7 or 8 years, and has always made fair returns. This last spring I dressed the bed in the following manner: Just after the first breakup of last winter, (about the end of February) having to clean out my hogpen, where the dung, litter and ice had much accumulated, I spread this manure thickly on the asparagus bed, entertaining some doubts, however, as to the usefulness of it, if not actually injurious to the plant. Another frost setting in, I was prevented from spading it in, and at the approach of warmer weather I feared that by spading I might injure the young shoots coming up; so I covered the manure on the bed with about two inches of good earth, so that every particle of it was hidden from sight. I then added a light dressing of salt to it. Now to the result: the shoots came up very vigorously, being not only larger in size, but sending

three to four shoots from the same root at the same time. Since then I can almost say I have lived on asparagus. Every other day I cut a peck measure full of the best shoots, measuring from half an inch to one and a quarter inches in diameter, and remarkably tender—more so than last year, when manured with horse droppings.

I regret that I live 50 miles from you, or I would take the liberty of sending you a few choice shoots; but as it is, I presume the same quality can be bought in your market; if not, I hope some of the gardeners near your city will try the same means, and state their success in your paper.

Your obedient servant,

A. H. K.

The Peach Crop as Effected by the Degree of cold.

For the Michigan Farmer.

RAISON, (5th Mo.) April 7th, 1849.

FRIEND ISHAM:—While forwarding the names of one or two new subscribers for thy increasingly interesting paper, I will embrace the opportunity of saying a word about peaches. I have near 150 trees of sufficient size to bear, but I do not expect to gather a peck of fruit from them this season, there being but a very few scattering blossoms on them, (except on two or three limbs that were very near the ground and probably protected by the snow,) nor do I think any of my near neighbors are much better off.—I have long been familiar with the opinion entertained by many persons that the peach cannot withstand a certain degree of cold. In some parts of the country it is said that whenever the mercury descends to 7 degrees below zero, the peaches are all destroyed. In other parts, the fatal degree is placed as low as 14 degrees below zero. Now although I believe that the accompanying circumstances are generally such that we need not entertain much hope of a peach crop the season after a winter of such severe cold as 14 degrees below zero, yet I am not prepared to adopt the sentiment that, that degree of temperature, or even a much lower one, must necessarily be fatal to the peach. Among other reasons for doubting the correctness of the opinion, I will give one that has just come under my observation.

Having occasion to visit the western part of this county within a few days past, I was agreeably surprised to see the peach trees on some of the "hilly openings" just expanding their buds into full bloom, apparently without a single injured or imper-

fect one amongst them, and yet these trees were not sheltered by buildings or in any other perceptible way more than trees on lower grounds not far distant, on which there was not a blossom to be found, neither were they very near any considerable stream or body of water, Michemanetan or Devil's lake, being about three miles distant. Now as the temperature of the air last winter, as indicated by the thermometer in divers parts of this county, was from 16 to 22 degrees below zero, and there appears to be no reasonable ground for supposing it could be less on elevated, or exposed situations—why have those peaches escaped unscathed? My own opinion is that the injury to the peach depends more upon the peculiar state the bud is in at the time of frosts and severe cold, than on the severity of the weather. I am glad the attention of observers is called to the subject, that we may, if possible, arrive at a knowledge of the true reason of the injury, and discover a way, if any such lies within our reach, of preventing it.

Respectfully thy friend,

J. GIBBONS.

For the Michigan Farmer.

Cultivate Orchard Ground.

Yes, Mr. Editor, cultivate orchard ground. There is a case right in point, right under my own nose, showing clearly that it is advisable to do so. I allude to the orchard of a near neighbor, which numbers about 80 trees. They were set out in the spring of 1847, about one half of them, upon ground that had been seeded down the preceeding season, and the other half upon ground that was then, and has ever since been under the plow. At the time of transplanting, they were about an inch in diameter. Notwithstanding they have had but two years in which to grow, and notwithstanding, too, those set in sword land, have been as liberally manured as the others, still the average size of the latter is, at least, double that of the former. This is by no means, an isolated instance. Those which have fallen under my own observation, are indeed numerous; and all support the same conclusion. Believing that a detailed account of additional instances, at present, would be of no practical utility, to the readers of the Farmer, I will barely say in conclusion, that if you would have beautiful, thrifty trees, and fine, nice fruit, in lieu of the opposite, in both respects, *cultivate your orchard ground.*

May 15th 1849.

OTISCO.

A Select List of Apples, with a few observations on their respective merits. By Samuel Walker, President of the Massachusetts Horticultural Society.

DEAR SIR:—For the first time, I have ventured to place on paper, a select list of apples, such as are, in my opinion, the best suited for the meridian of the New England States. I have done this with two motives. First, to impart the little, but all the information I have, on this subject, and secondly, with the hope that others, better informed than myself, may correct the list I thus submit, add others thereto, and impart further information through the pages of your Magazine.

I have placed the varieties in the order in which I rank them for cultivation, provided I had but one, two, three, or more trees, that is, if I were confined to the cultivating of only one apple tree, I should plant No. 1, the Rhode Island Greening; if two, then Nos. 1 and 2, and so on.

List of twenty-six varieties of apples.

R. I. Greening Gravenstein, Baldwin, Early Harvest, or Strawberry; Nonsuch, Porter, Minister, Tolman's Sweeting, Large Yellow Bough, Roxbury Russet, Danvers Winter Sweet, Pomme Royal, Hubbardston Nonsuch, Fall Pippin, Fameuse, Summer Pearmain, White Seek-no-Further, Benoni, Red Astrachan, Fall Harvey, William's Favorite, Ladies' Sweeting, Jonathan, Peck's Pleasant, Ribstone Pippin, for New Hampshire and Maine; Esopus Spitzenberg, for Western Massachusetts.

There are many others deserving of cultivation, as the Garden Royal, Peck's Pleasant, Northern Spy, Westfield Seek-no-Further, Herefordshire Pearmain, &c., &c.

Feeling, as I do, that the above list is not perfect, and that it may meet with many objections on the part of cultivators, I wish to state, that I have placed the *R. I. Greening* at the head of my list, from the fact that a good crop is generally produced every season; the tree is a free grower; fruit, fair, large, and handsome. A *good table apple*, but not first-rate. For the kitchen, it has no superior, if an equal. These combined good qualities have induced me to place it as No. 1.

Gravenstein.—I have placed this variety next in order, because it is a summer and early autumn apple, and will furnish the grower with good fruit for the table and kitchen, in connection with the R. I. Greening from August to February, inclusive; thus combining more useful properties, than if the Baldwin, next in order, had been placed with No. 1.

The following is from an exchange paper: *Soap Suds*.—The finest peach and apricot trees that we have ever seen, received a weekly or monthly wash of soap suds. A bucket full to a tree, taking them in rotation, answers a capital purpose to destroy the eggs of insects, and supply potash where it is much needed. Never waste in a sewer, or about a kitchen, a fertilizer so valuable as soap suds.—*Ohio Cultivator.*

MICHIGAN FARMER.

WARREN ISHAM, EDITOR.

PUBLISHED SEMI-MONTHLY.

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Considerable complaint has been made since we have been absent so much, that our paper has not been received by a number of subscribers. As a matter of course we cannot be every where and do every thing personally, at the same instant. We had supposed we had employed faithful men to mail the paper, and we presume, they supposed they had done it right. We regret the failure, and trust it will not again occur. If those who have missed any of the numbers, will notify us, we will supply them.

Our correspondents must make all due allowance if their favors do not always meet with very prompt attention, as the editor is absent a great portion of his time.

We would say once for all, that our editorial correspondence is written in great haste, just where we happen to stop over night, and frequently under great disadvantages, and is dispatched post haste, without having been even read over. Should there be some slips in it occasionally, all due allowance must therefore be made. We shall not always see the proof sheet.

The *Working Farmer*.—We have received the three first numbers of this new agricultural journal, published in New York and edited by Prof. Mapes. It is a monthly of sixteen pages, at fifty cents a year. It is recommendation enough of the work, that Prof. M. is its editor.

With all due deference, we would suggest to Prof. M. the propriety of changing the name of his paper, from "*Working Farmer*" to "*Scientific Farmer*." The latter, we think, would be much more befitting.

The *Gold Mines of Gila*.—We have received a copy of a work with the above title, by Charles W. Webber, De Witt and Davenport, publishers, New York. Those who delight in graphic sketches of frontier life, in romantic incidents, wild, personal adventure, and in vivid descriptions of natural scenery, will find much to interest them in this book. The scene is laid in Texas and New Mexico, and the writer himself was a conspicuous actor. He vouches for the truth of every word which he utters. For sale at McFarren's.

The *Gold Dollar*.—We have been shown a specimen of the gold dollar by friend Lewis the broker, who is wide awake for such things.

Letter from the Editor.—No. 7.

WHITEMORE LAKE, May 9th.

To one who has been cooped up in the city for months, familiar only with its dust, its bustle and its noise—tired of its monotony, and aching for freedom,—to such a one to be permitted to look forth upon the green earth, and to hold communion with the beautiful in nature, O it is delightful! Many a time have we paused to gaze upon the scenery of some lovely landscape which presented all the attractions of a natural park, in a far higher degree than any thing which was ever fashioned by the hand of art. Often have we stood motionless to listen to the sweet notes of the tuneful thrush, as she sat perched upon the topmost bough of the tallest tree of the forest, or to the soft, symphonious strains of robin red breast, as she poured forth her ditties from a neighboring apple-tree; and as the dusk of evening gathers around us, how pleasant to the ear is the night song of the shrill-voiced whippoorwill. Is there any thing in the music of the piano and the harp to be compared with strains like these? But we must not indulge.

New Machine.—A machine has been introduced into some parts of this state, for cutting off the peaty surface of marshes, preparatory to seeding them to tame grass. It seems to be a species of plow, with wings spreading themselves out right and left, cutting and turning the surface over to the width of four feet, (two feet on each side,) which, after being dried, is burned to ashes. This machine has been operated successfully by Mr. Belknap, an extensive farmer in Henrietta, in Jackson county, who has been successful in converting extensive marshes into excellent tame meadows.

The following strike us as the advantages resulting from the use of this machine. In the first place, it is very difficult to get seed to catch in the loose, spongy, soilless surface of our marshes, there being nothing in which it can germinate and take root. In the next place, it takes off all their roughness, and leaves a smooth surface. And lastly, the ashes of the peat, by means of the alkali they contain, neutralize the acid of the muck which underlays the peaty surface, which acidity must by some means be removed before very beneficial results can be expected.

Plowing for Wheat.—Mr. Waldron, of this vicinity, plowed a part of a field the third time preparatory to sowing wheat, intending to prepare the whole field in the same manner, but was prevented by a fall

of rain, so that the remaining part of the field was plowed only twice, and on that part of the field the wheat was far better than on the portion which was plowed three times, the difference being very perceptible.

On another occasion, he plowed a portion of a field preparatory to sowing, when he was interrupted by a heavy rain, which drenched and made a perfect mortar of it. After the ground had become dry, he went on and plowed the remaining part of the field. He regarded the part plowed before the rain as being in a very bad condition, it was so bedded and packed down. He sowed the wheat before any rain fell upon the portion last plowed, it being very mel-low and loose. But the wheat upon the part plowed before the rain, was much the best, the difference in its favor being noticed by every one. He dragged it more thoroughly after sowing than the other portion.

Restoring Appletrees to Life.—Mr. Waldron has made an experiment with three of his appletrees, which was signally auspicious in its results. The trees had appeared to be on the decline for three years. The leaves turned yellow, and as early as August they all dropped off. Matters grew worse and worse with them, from year to year, until the third year, when they appeared to be gone past all hope of recovery, their leaves being cast thus early, and at the same time the bark presented the appearance of their being struck with death. In this emergency he resolved either to kill or cure. Digging the dirt away from the trees, so as to lay as many of their roots bare as possible, he poured a pail full of boiling water upon them, close around the base of the trees, and followed it with a peck of unleached ashes, and then drew the soil back again. This was in the fall, and in the spring the trees put forth their verdure and appeared to be endowed with new life and vigor, and now they are as healthy, vigorous and thrifty, as any trees in his orchard. They were not all in this condition and operated upon at the same time, nor any two of them, so that the efficacy of the remedy has been proved by three different experiments, made at different times, upon trees in different stages of their growth.

Grafting into the Wild Plum and White Thorn.—Mr. W. grafted quite a number of plum scions, some sixty or seventy, into the wild plum stock, and after being transplanted they grew vigorously for four or

five years, when they commenced dying, and now they are all dead but four. Those which were grafted into the top of the wild plum tree live and do well, except that they greatly overgrow the stock. About the same time he grafted some thirty or forty pear scions into the white thorn. They lived and had a very thrifty growth the first year, and then commenced dying, and now but two out of the whole number survive.

Mr. W.'s theory, (what, a practical farmer have a theory—the deuce!) Mr. W.'s theory, we say, is, that the roots of these wild stocks are not sufficient to take up nutriment for the scions, after they have attained to a certain size—quite a plausible account of the matter.

The probability is, that there was a deficiency of certain elements in the soil, which were essential to the health and growth of the trees. The wild plum is much used as a stock for grafting by nurserymen, and it is said to do extremely well, even better than the tame plum stock, as it will live and flourish in situations in which the former will perish, as, for instance, in a very wet soil.

McMillan's Cast Iron Plow.—Mr. W. has one of McMillan's cast iron plows, which he has used sufficiently to thoroughly test its qualities, and he pronounces it far superior to any plow he has ever used. He has been in the habit of using Wood's patent, but he thinks the above mentioned decidedly superior to it, whether as it regards ease of draft, standing snugly and firmly to its work, or the grace and perfection with which it turns the furrow. A single glance at it satisfied us that he had not estimated it above its merits. There is a fitness in its various parts, and especially in the conformation of the mould board, which fills up the idea of a perfect plow about as well, to say the least, as any thing of the kind we have ever seen. It is all cast iron but the handles. The retail price of it at Ann Arbor, is seven dollars. How the celebrated plow of Ruggles, Nourse & Mason, would compare with it, we do not know, as we are not sufficiently acquainted with its merits to form an intelligent judgment.—From its appearance, however, we should judge that it combines the same qualities.

And here we cannot but press upon the attention of our agricultural friends the importance of availing themselves of the advantages of the various improved implements of husbandry which have been introduced, and which have proved them-

selves to be really advantageous. Much of the toil and drudgery, both of man and beast, is saved by these implements, and at the same time far greater results are secured. Hitherto there has been a difficulty in procuring them, but this difficulty will no longer exist; our agricultural warehouses will be a great benefit to the farmers of our state, should they so far regard their own interests as to extend to them a liberal patronage.

Peach crop as affected by situation.—In the discussion of the question in reference to the degree of cold necessary to destroy the peach crop in winter, it seems to be taken for granted, that exceptions must be made in favor of those locations which are in the immediate vicinity of considerable bodies of water. We must confess, that we do not readily see the philosophy of this, inasmuch as the saving influence is attributed to the mist which rises from the water, which, of course, is totally obstructed during the whole ice bound season of the year. Philosophy, it is true, may not be able to bring within the scope of its calculations all the causes which conspire to produce any given result, and therefore may err. We would not follow its teachings in opposition to palpable facts. We are not a theorist of that sort.

We said exceptions were made in favor of such locations, but these are not the only locations to be regarded as exceptions. We have every where found, that the peach bud generally escapes destruction upon very elevated situations. When there is a clean sweep of the crop in the villages and on the plains, it seldom fails in such locations, quite as seldom as it does in the immediate vicinity of a body of water. And it is a fact familiar to the observation of all, that in passing from a low to an elevated situation, after night-fall, a very sensible difference in the temperature of the atmosphere, is immediately perceived, and not unfrequently the contrast is so great as to produce a most grateful sensation, like that experienced in passing from a cold to a warm bath.

Wire fence. Some of our readers may remember, that we came out in a phillippic against wire fences, a few numbers back. Our intention was to use up the fence and all its abettors, among whom, and by no means the least, is our friend Peters, of the Wool Grower. In our perambulations, however, we found one man who either had not read what we had said to him and all the rest of the people of Michigan on the

subject, or else he had determined to cast off our authority and set up for himself. A wire fence he seems determined to have at all hazards, and have it he will, whatever may be the consequence. Well, let him have it—that's the way to cure him.

But to offset against this, we found another individual who had made an experiment with it, and as we stood looking at it, he said to us, with some emphasis, "You was right about wire fence; I am sick enough of it, and will never make another." One thing he complained of was, that the wire would break in winding it around the post. We perceive, that friend Peters proposes to fasten it with staples, which would of course enhance the expense somewhat.

But if there were no other objection to it than simply its appearance, or rather lack of appearance, that is quite enough for us. At a distance of ten rods, you can see nothing but the naked posts, and what a hideous spectacle is that! How ridiculous to the eye of a passer-by, to see a man's farm all set round with posts, and apparently not a rod of fence upon it.

And surely, one ingredient which enters largely into the farmer's fountain of enjoyment, consists in the *appearance* of things about his premises. But if this be so, and he be a man of any sensibility at all,—a man who has any sense of fitness and unfitness, beauty and deformity, what must be his sensations, upon looking abroad over his independent acres, and seeing—what? Why nothing but rows of sticks stuck in the ground so as to stand perpendicular, and nearly in a line with each other, and not a fence to be seen?

No but you say, he can imagine, that the wires are strung along there too, making a good substantial fence. So he can, but he may give reins to his imagination until it tires upon its wing in supplying defects, and how will that help the matter? After all, there are the naked posts, and there they will stand until they rot down, obtruding themselves upon his bodily vision, from the time he rises in the morning, until the curtain of night mercifully drops, and conceals the deformed object from his view. Surely, the man who could endure such a sight, must himself be a mass of deformity. For ourself, we would far rather be doomed to the necessity of taking up our abode in the wilderness, far away from the habitations of man, than be compelled to live amid such an exhibition of deformity, for there we could gaze upon and enjoy the beauties and

sublimities of nature, the handiwork of the great I AM.

No but, you say, there is the utility of the thing, and that makes any thing look well. We are not a utilitarian of that sort. And besides, in order to have a thing look well, it must be capable of being looked at. That's what we complain of; there are no looks about it. You only see just enough to give you such a deformed view as to make your flesh crawl upon your bones.— And furthermore, we are quite disposed to question the utility of the thing for anything like common purposes. It is impossible to make it close enough to stop small stock, without robbing it of the only recommendation which it ever had, viz: *cheapness*.

If there is any situation in which a man would be justified in making such a fence, it is to be found in the case of the individual above mentioned, his design being to fence a marsh with it. Marshes are generally back out of sight, and hogs cannot hurt them, if they get into them. If our friend persists in executing his purpose, we advise him to visit that portion of his farm as seldom as possible, for he may expect to have the horrors for a week afterwards.

Letter from the Editor No. VIII.

ANN ARBOR, May 18, 1849.

Again we find ourselves in the lovely village of Ann Arbor, still more lovely than when we were here a few days since. The hill tops which circle the village, have, in the meantime, clothed themselves in green, while the shade trees with which it is decorated, are fast developing their beautiful foliage, presenting quite a picturesque and romantic appearance. But we must restrain ourselves.

Farm of D. B. Brown, Esq. A little to the south of the village, is the farm of D. B. Brown, Esq., most delightfully located, the village and college buildings being in full view from his house. Originally Mr. B. was the proprietor of five hundred acres of land here, all lying together, and as beautiful to look upon, as any little spot of earth we have ever set eyes on. He has, however been selling off, from time to time, and now his farm consists of some eighty or ninety acres of improvement here, and a wood lot of forty acres a mile off. But he remarked, that he had derived far more profit from the eighty or ninety acres which he now cultivates, than from the three hundred acres of improvement which he cultivated for several years previously to his

making the sales above mentioned. Then he was scarcely able to pay current expenses, whereas now he is making a good profit. The reason is, that now he has no more land than he can cultivate well, whereas before, he could do no sort of justice to it, and the consequence was, that to a great extent, the labor expended upon it was thrown away. And such is the experience of every man who undertakes to manage more land than he can cultivate well. We have frequently known men undertake to put large farms under improvement, relying upon the prospective avails to pay the expense, but we have never known an instance in which there was not a sad disappointment in the end.

Some, he said, seemed to think, that farming could be done any way, no matter how. But this was a great mistake. Farming was an art to be learned; there was but one way to farm it right, and that was not to be blundered upon. And the true reason why so many farmers succeed so poorly, is that they trample under their feet those laws of the natural world which have been established by the architect of nature, and in obedience to which alone the result sought is to be obtained; and the consequence is, that they have to suffer the penalty affixed. And "their foolish heart is so darkened," that they ascribe it all to "bad luck." Never were men so unlucky. Deluded men! As well might they expect to hit the mark by firing at random, as by aiming directly at it.

Wheat husbandry. Mr. B. spoke of the great advantages accruing to the wheat grower from an alternation of wheat and clover, and remarked, that farmers were fast falling into the practice. He is in the habit of pasturing his clover fields the fore part of the season, and allowing them to come forward just in time to make a good growth to turn under. This he thought necessary, where the object was to renovate lands which were somewhat run down.— But lands which are in good heart, he tho't might be kept so, by turning under the second crop, after having removed the first.

It is undoubtedly true, that clover is a very exhausting crop. It requires precisely the same elements to nourish it, which enter into the composition of the straw and grain of wheat, and some of them in larger quantity, and but one of them (silica, or sand) in less quantity, if our recollection serves us. Why then should not the removal of the first crop, (the second being

turned under,) impoverish the soil, since a portion of the soil, all of it which entered into the composition of the crop, has been removed? Simply because clover more than any other known plant derives its nutriment directly from the gasses of the atmosphere, absorbed by the leaves, while its long tap root drinks in the mineral elements of the subsoil. Thus by turning under the second crop, the organic matter drawn from the atmosphere, and the mineral elements drawn from the subsoil, become incorporated with the surface soil, and fully supply the drafts which have been made upon it by the first crop, and we think there is pretty good reason to believe more than supply them.

Liming and Plastering Seed Wheat.—

Mr. B. thinks that soaking seed wheat in a solution of lime, and rolling it in plaster, makes a difference in the yield, of from five to ten bushels to the acre. He says the difference between wheat, the seed of which was thus prepared, and that whose seed was sown without preparation, is marked and striking, and obtrudes itself upon the observation of every passer by. If this be so, it is well worthy the attention of our farmers. Very few, we believe, have been in the habit of thus preparing their seed. At any rate we hope the matter will be extensively tested, as it can be done at very little expense.

Preparation of Seed Corn.—Mr. B. thinks that sliming seed corn over with common soft soap, (about a pint to a bushel) and then rolling it in plaster, is the best out of a great variety of preparations which he has tried. It effectually prevents birds and squirrels from pulling up the corn.— Rolling the seed in tar, he said, seemed to destroy its vitality, as but little of it came up.

Fruit on elevated ground. Mr. B. has a fine fruit yard, but he expressed his regret that he had not located it on the high ground a little to the west of his dwelling, as a security against frost, and remarked that his neighbor's peaches (some sixty rods distant) had never been destroyed by frost in a single instance, and they were about upon the same elevation with the location above mentioned, while his own were frequently cut off.

All Mr. B's summer and fall apples were destroyed in the bud by the cold in April, while all his winter apples escaped. A portion of the tops of some of his trees are thickly set with blossoms, while the other portion of the same tops is entirely bare of

them, the one part being winter and the other early fruit. And throughout his orchard the winter trees which are alternated and intermixed with the earlier kinds, have all escaped, and are in full blossom, while upon the others scarcely a blossom is to be seen.

Management of Bees. Mr. B. lost three or four swarms of bees last winter, some of them by the miller, or bee moth. He thinks that Kelsey's patent hive affords security against this pest. From one of these hives he took 25 pounds of honey, which had been accumulated by a swarm which had been hived only ten days, and it wintered well. In this hive there are three drawers, sufficiently deep to fill the whole interior of the hive, and when the honey is taken out of the top one, it is made to change places with the bottom one, and is speedily replenished again with honey.

A Cheat upon the Wool Grower.

Samuel M'Farlane, an extensive wool-grower in Washington county, New York, in a communication to the Washington Examiner, speaks of a deception which was successfully played off upon wool-growers last year by the eastern manufacturers, by means of which, a great portion of the wool in the country was bought up for far less than its true value. By means of letters and communications in the public papers, industriously circulated all over the country, an impression was made that the country was flooded with woollens thrown in upon us by the convulsions in Europe, and that it would take years to exhaust them. By this means the price of wool was reduced very low, and it was not until the greater part of the clip was disposed of, that the cheat was discovered. In the fall it was found out, not only that there was no overplus of woollens in the country, but an absolute deficiency, and the price of wool went up again, after it was nearly all sold.

It is said, that the manufacturers refuse to purchase from Perkins & Brown, wool dealers in Springfield, Mass., who first exposed the cheat.

For the Michigan Farmer.

Who believes it?

Not long since I read, in a Detroit paper, an extract from an eastern agricultural journal in which I learned some marvelously strange things. I have read similar articles several times before, and I have concluded that they are false, or very profound, or that my intellect is very weak. Which

is it? The article referred to teaches such things as these; that wheat was originally a kind of wild grain; oats and rye, the wild oats and rye of our forests and plains; carrots and parsnips, the wild poisonous roots growing in our swamps and marshes; peaches, bitter almonds; and all our varieties of rich and delicious apples have been produced by continual and long cultivation of the crab.

Now, does any one really, seriously believe such assertions as these? If so, speaking after the manner of phrenologists, their marvelousness must be *very large*, and their causality *equally small*.

Let us look at the reason of the thing.—If the articles enumerated have improved as stated, other vegetables have doubtless done the same. All the grasses, grains, and roots; all the fruits, flowers, and trees have been wonderfully changed since Adam's time. What delicious living our most distant ancestor must have had according to this theory! Wild oats, rye, and wheat; poison carrots and parsnips; bitter peaches, and sour crab apples! Who *could* blame him, under such circumstances, for eating of the "forbidden fruit?" The world must have been a miserable world; a world of briars, brambles, thistles, thorns, wild unpalatable grains, poisonous roots, bitter acid fruits, uncouth and scraggy trees, barren rocks, desert sands, and every thing else unpleasant that the imagination can conceive. Then the animal creation must have corresponded with the vegetable. The horse, the noblest of animals, probably sprung from some scraggy, raw-boned, long-shanked, ill-looking animal about the size of a shetland pony! Woe to those that rode on horseback in those days! The cow probably resembled a poor lean, starved goat, as much as anything now on the earth. If you would know what the hog sprung from take one of the long-legged, long-nosed, long-eared, real pointer shotes of the present day; starve him till the sun can almost shine through him and you will have an imperfect likeness of what Adam's pigs were.

But I have neither time nor patience to pursue this subject. Fruits, roots, grains, grasses, stock, &c., have been improved undoubtedly in some parts of the world, while in others they have deteriorated. That careful, scientific, long-continued cultivation will produce great and beneficial changes is certain; but it is just as reasonable to contend that the human family are an improved variety of the ourangoutang, as that all our fruits, grains, roots, &c., originated in the manner stated in the article to which I have referred.

D. W. C. L.

Mundy, Genesee Co.

Does Wheat turn to Chess.

For the Michigan Farmer.

AVON, May 25, 1849.

MR. ISHAM: In reading one of your interesting letters published in the last Farmer, dated at Whitmore Lake, I was surprised at the opinion you expressed in regard to the transmutation of wheat to chess, or cheat, and your charge of ignorance against all those who differ from you in opinion on that subject.

As the Michigan Farmer is the first agricultural journal that I have read which has expressed its belief in the change of wheat to chess, and edited too by a scientific man, you may imagine my disappointment when it goes to upset all my experience for more than thirty years in the raising of wheat, and as every effort of mine to produce such a result has failed, having tried all I have heard of, and uniformly without success.

I hope you will give us some satisfactory reason for your belief. C. A. C.

REMARKS BY THE EDITOR.—We will take back the charge of ignorance, if we made it, against those who differ from us in opinion, for we find ourselves at loggerheads with at least two of the most intelligent farmers in the state of Michigan. What may be the opinion of other agricultural journals upon the subject, we do not know, nor have we, in making up an opinion on any subject, ever thought of enquiring what this or that agricultural journal said or thought on the subject. To be sure, we always endeavor to avail ourselves of all the sources of information within our reach, and then endeavor to sift, classify, compare, and draw conclusions according to the best of our judgment.

We assure C. A. C. that when the proper time comes, we will give the reasons of our belief, and they are reasons, which, to our own mind, are abundantly "satisfactory." We will endeavor to show, in the first place, that the thing is quite *probable*, from the nature of the case, and also from analogy, and in the next place, that it is certain, from fact.

We are waiting to see what our talented friend, J. G. has to say on the subject, as we understand he has something in course of preparation.

This is a subject on which "an honest difference of opinion," may be entertained, with perfect impunity, and one which admits of a great show of argument on both sides, and we may add, one which may be speculated upon for a twelve month, without leading to a single practical result. We hope, therefore, we shall all be as concise as possible. We should rather nothing should be said than have a long and tedious discussion. However, we will give to others as much space as we occupy ourselves.

For the Michigan Farmer.

Management of Bees.

MR. EDITOR:—In all the numbers of the Farmer which I have read, I do not recollect having seen a single article in regard to that very useful insect, the honey bee.* This is a little remarkable, especially when we consider how great a share of our farmers keep bees, and how few manage them successfully. That bees when they "do well," as the saying is, are very productive capital, is an indisputable fact; and that they will "do well" almost every season, with proper management, is equally certain. That our climate is not such a one as an experienced apiarian would select, in which to raise bees with the least trouble and the fairest prospect of success is readily admitted; yet at the same time it is believed that a little attention to the subject will enable every farmer, and, in fact every family, to supply themselves, at a trifling expense, with an abundance of good honey, one of the greatest luxuries that our country affords.

There is not probably, more than one in five of those who try their hands at bee-keeping, that are really successful. Their bees swarm and go to the woods, or they "melt down" on a sultry summer day, or perish with cold in winter. Now most misfortunes of this nature arise from carelessness or want of skill on the part of the apiarian, and may, with a little care, be easily avoided.

The first difficulty—that of bees seeking a new home in the woods—is less easily overcome than the others, yet I believe there is seldom any necessity of suffering a loss of this kind. This evil is certainly avoided when the patent hive is used, and new swarms are *manufactured* instead of being permitted to come forth in the usual way. I have also used successfully a double hive, or hive made in two parts, so that it could be separated and a new part attached to each—thus dividing the swarm without risk. Yet after all I prefer letting them swarm—it seems most natural—and besides, is a kind of pastime, of which it appears wrong to deprive them.

How, then, should bees be managed when they swarm to prevent them from leaving for the woods? But few directions need be given. As a general thing the less management the better. Above all, do not enrage your bees, nor frighten your neighbors, by jingling bells, or drumming on tin pans, or firing guns. Throw no dirt or water among them. Be quiet, and let

them have their own way until they alight which they will be sure to do in a few minutes, usually at a distance of from two to ten rods from the old hive. Then is the time, and the proper time, to commence operations. Place under the tree upon which the swarm hangs, a table, or something to answer the purpose. Place, the hive upon it, each corner being raised from half to three-fourths of an inch from the table by blocks placed under them. Then gently shake the bough or tree upon which the bees hang, so as to precipitate them upon the table near the hive. If the hive is clean they will most assuredly enter. Many invert the hive and shake the bees directly into it. This may be sometimes desirable—many consider it indispensable, but it is not. If the hive is new and clean do not attempt to render it more agreeable to the bees by washing with sugar and water, whiskey, or any nostrums. If it is not perfectly sweet, and a better cannot be had without too great delay, I know of no better way of preparing it than by rubbing thoroughly with hickory leaves dipped in strong, clean brine.

Sometimes when a swarm has been hived and comes forth dissatisfied with their new home, it is found necessary to use means to make them alight. They will, it is true generally do so of their own accord, but this cannot be as certainly depended on as when they first issue from the old stock. Hence, if they manifest a disposition to abscond, throwing sand or water among them or firing a gun will generally bring them to a halt. In all such cases, when they are again hived, the queen should be sought out and one of her wings clipped, so that she cannot fly. Then the swarm will not go, or, if they do, will return as soon as her majesty is missed. One of my neighbors had a swarm leave after the queen's wings had been clipped. They went to the woods were gone over half an hour, when, missing their queen, without whom they seem to know full well they must soon perish, they again returned. Finally it is always well when hiving a swarm, to watch closely the queen, and, if discovered, clip one of her wings, which prevents the possibility of losing the swarm unless there happen to be more than one queen, a thing that seldom happens in early swarms.

If the new swarm comes out in a hot sunny day, the hive in which they are put should be well shaded. This, doubtless, will often prevent their leaving it.

All hives, also should be shaded, and so situated that air can circulate freely around them. Many fine swarms are lost every summer through negligence in this particular. It has generally been supposed that hives should front the east or south, but I am convinced there is less philosophy than fancy in this idea. The north or west, upper or lower side of the hive, answers just as well, and some of them, perhaps, better for the entrance, than the south or east.

I intended in this communication to say a few words in regard to the size of hives; the superiority of the patent over the common hive; the proper management of bees in winter; the diseases of bees, &c. &c. But fearing Mr. Editor, that I have already tired your own and your readers patience, I will drop the subject for the present, promising to resume it at some future time, should this prove acceptable. In the mean time I should like to hear from others on this subject whose age and experience render them much better qualified than myself to interest the readers of the Farmer.

Respectfully, D. W. C. L.

MUNDY, Genesee Co., May 15th, 1849.

* In some of the first numbers of the last volume, there were several articles, in relation to the management of bees, but D. W. C. L. was not a subscriber at the time.—Ed.

Letter from a Postmaster.

GENESEE, May 5, 1849.

MR. ISHAM—*Dear Sir*: Enclosed you have a few names to add to the number of your subscribers in this place, and also a few dollars of the "ready" to vouch for their responsibility. I find that the circulation of the Michigan Farmer can be extended by a little effort on the part of those who feel an interest in its prosperity. Its merits and its claims have only to be known, to receive the approval and the support of our farmers. I take several agricultural papers, from which I have received much profit.—I have been amply paid for all I have expended for agricultural and horticultural papers by the information which I have received from *one* article in relation to transplanting and cultivating fruit trees. I now raise abundance of fruit from an orchard of five or six years growth (from transplanting.) My neighbors wondered what I was about with half a dozen hands, two or three days "setting out a few apple trees" (130.) I told them they would find out in the course of a few years, without being told, if they would visit my orchard. They (some of

them) now see that I have beautiful and thrifty trees, and delicious fruit, while their trees, set out at the same time, and of the same varieties, are small, and bear little or no fruit. Their only wonder *now* is, that they did not take more pains in their cultivation.

If it was not too late I would give the readers of the Michigan Farmer my mode of treatment, and the results. I say "*too late*," because the time for transplanting, (which is the time to begin right) is past.

Yours, &c., C. N. BEECHER.

For the Michigan Farmer.

Chemistry applied to Agriculture.

MR. ISHAM:—Having been for several years in the early part of my life a practical farmer, and being now a reader of your excellent paper, I cannot refrain from expressing to you, how much pleasure, I have drawn from the allusions you have made from time to time in your journal, to the subject of chemistry in its applicability to the art of agriculture, which you have very justly, in some of your numbers treated also as a science. This idea, that science is the ally, the handmaid of agriculture, itself the substructure and upholder of all other arts and interests in a civilized state, has led me to enquire how this can be rendered apparent to the farmer, and by what instrumentality it can be carried into practical operation. Within the limits of our own commonwealth, and accessible to all of its citizens, I know of but one source to which they can apply for the required aid and information on this subject. This fountain the writer has reason to hope may soon be opened, and faith to believe that it will water and fertilize the state.

You have, I suppose, already anticipated me in presuming that I refer to the state University at Ann Arbor. The *Indirect* relations of this institution to the interests of the social compact can never be fully understood, except by those who have the mental training which the study of her humanities imposes. But its more *direct* relations to the public good, such as the aids afforded to art by the sciences of chemistry, Botany, Zoology and Geology, can be generally appreciated, especially by those on whose interests these subjects immediately operate. These considerations have led me to express the wish that the regents of the University would at the earliest day practicable, relieve the professor of chemistry from some of the duties at present imposed upon him; leave him at liberty to employ his time in the analysis, and supply

him the means of analysing specimens of soils when sent to him through any of the agricultural societies of the state.

This we are informed has already been a subject of conversation among the members of the Board of Regents, and we take it for granted, that these gentlemen who are known to be faithful to the trust confided to them, have sufficient reasons for postponing their action on this subject. An arrangement by which a farmer could have samples of his soil carefully examined by the aid of proper chemical reagents, and the means of supplying what is deficient and correcting what is in excess made known to him, would exhibit the University in a new relation to the people, by whom it would be henceforth cherished not only as the fountain of wisdom, but as one of the well-springs of wealth open to every youth in the state.

SENEX.

DETROIT, May 18, 1849.

LADIES' DEPARTMENT.

Maternal Influence.

The mental fountain is unsealed to the eye of a mother, ere it has chosen a channel, or breathed a murmur. She may tinge with sweetness or bitterness the whole stream of future life. Other teachers have to contend with unhappy combinations of ideas. She rules the simple and plastic elements. Of her, we may say, she "hath entered into the magazine of snow, and seen the treasure of the hail." In the moral field, she is a privileged laborer. Ere the dews of morning begin to exhale she is there. She breaks up a soil which the root of error, and the thorns of prejudice have not pre-occupied. She plants germs whose fruit is for eternity. While she feels that she is required to educate not merely a virtuous member of society, but a Christian, an angel, a servant of the Most High, how does so holy a charge quicken piety, by teaching the heart its own insufficiency!

"The soul of her infant is uncovered before her. She knows that the images which she enshrines in that unoccupied sanctuary must rise before her at the bar of doom.—Trembling at such tremendous responsibility, she teaches the little being, whose life is her dearest care, of the God who made him; and who can measure the extent of a mother's lessons of piety, unless his hand might remove the veil which divides terrestrial things?"

"When I was a little child, said a good man, my mother used to bid me kneel beside her, and place her hand upon my head while she prayed. Ere I was old enough to know her worth, she died, and I was left too much to my own guidance. Like others, I was inclined to evil passions, but often felt myself checked, and as it were, drawn back, by a soft hand upon my head.

When a young man I travelled in foreign lands and was exposed to many temptations. But when I would have yielded, that *same hand was upon my head*, and I was saved. I seemed to feel its pressure as in days of my happy infancy, and sometimes there came with it a voice, to my heart a voice that must be obeyed—"O! do not this wickedness, my son, nor sin against thy God."

From the Boston Cultivator.

Beauty.—Some are more susceptible to the beauty of the face, and implicit homage is rendered to it; oftentimes to such a degree, that those who are destitute of this gift, are viewed with apathy or disgust; while their minds are erroneously imagined to correspond with their uninviting exterior. Pleasant is it to gaze upon lovely features, catching the almost heavenly expressions, which irradiate them; but how soon are we taught their evanescence! Sickness, afflictions, age, and a multitude of lesser ills will eventually imprint upon that delicate brow, Time's fatal seal; and how often concealed 'neath this pleasing guise, exists a heart, cold, uncultivated, and actuated by no motive, save selfishness. True, we happily find it is not always so; and how transcendently charming does it appear, when the countenance is the beaming index to a mind and soul, sanctified and adorned with holiness and love!

ANNA.

Slander.—Yes, pass it along, whether you believe it or not—that one-sided whisper against the character of a virtuous female. You say you don't believe it, but you will use your influence to bear up the false report and pass it on the current. Strange creatures are mankind! How many reputations have been lost by a surmise! How many hearts have been bled by a whisper! How many benevolent deeds have been chilled by the shrug of a shoulder! How many individuals have been shunned by a gentle mysterious hint! How many chaste bosoms have been wrung with grief by a single nod! How many graves have been dug by a false report! Yet you will pass the slander along; you will keep it above the waters by a wag of your tongue when you might sink it forever. Destroy the passion for telling a tale we pray you. Lisp not a word that may injure the character of another. Be determined to listen to no story that is repeated to the injury of another, and as far as you are concerned the slander will die. But tell it once, and it may go as on wings of the wind, increasing with each breath till it has circulated through the state, and brought to the grave one who might have lived and been a blessing to the world.

True glory consists in doing what deserves to be written, writing what deserves to be read, and making the world the happier and the better for having lived in it.

A Revolving Flue Cooking Stove has been invented for roasting and baking.

For the Michigan Farmer.

Various Matters.

KALAMAZOO, May 22, 1849.

MR. ISHAM: I have read the numbers of the Michigan Farmer, from the first of last January, with much satisfaction. At the time you took charge of the paper, I refused to subscribe for it for two reasons; first, because I already took the Cultivator, Genesee Farmer and Prairie Farmer; second, I could not afford to increase the number of papers, but the most forcible reason was, that one who had devoted his life to subjects entirely foreign to agriculture was unfit to edit an agricultural journal. I now acknowledge my last objection entirely unfounded, as the Farmer gives unmistakable evidence of industry and skill, worthy of the patronage of the entire agricultural population of this state; and will not suffer by a comparison with papers of long standing.

Our wheat crop looks very promising in this vicinity.

Fruit trees are loaded with blossoms except the peach, they being badly killed by the severity of the past winter, but in the timber land and places much elevated, the prospect for a good crop is fair. The 11th of January last my thermometer stood 25° below 0, which I think was the reason why so many fruit trees were killed.

I received from Long Island last fall a quantity of trees consisting of apricot, peach, pear, cherry and plum, in good condition, about fifty of the plum and as many of the cherries; the entire lot of peach and apricot were winter killed nearly to the ground.—They were standing in clusters with their roots well buried, the bodies standing perpendicular. I had another lot of peach trees of my own raising, which I had occasion to remove from where they grew, last fall; they were one year's growth from the bud, vigorous growth, consequently tender. I "heeled them in" with the tops laying nearly on the ground, but not protected, and they were entirely free from being winter killed, even to the extreme ends of the limbs. My grape vines have escaped the past winter except the White Sylvan and Black Cluster, they being mostly killed to the ground.

Yours truly, A. T. PROUTY.

The whole series of furrows on an English statute acre, each furrow nine inches wide, may be estimated as extending to 20,416 yards, or 11 miles and nearly 5 furlongs.

How grand is that character that can rise superior to selfishness, and cling to truth.

INVENTIONS & DISCOVERIES.

An Important Mechanical Invention for Casting Iron Pipes.—The Baltimore Sun notices at length; an important improvement in casting iron pipe, at the foundry of Thomas J. Lovegrove, in that city, which is the invention of that gentleman. By the ordinary mode of casting pipe, it is necessary to make a sand mould for every separate piece of pipe and a 'core' which is formed by wrapping hay around a rod, this again being coated carefully with clay to preserve the tubular or hollow form of the pipe. The improvement dispenses entirely with this tedious arrangement, and centrifugal power is applied to produce the same results in a quicker and better manner.

The invention consists of an iron mould, suspended horizontally and arranged for the introduction of the melted metal by means of a trough at one end. As the metal is introduced, a slight depression at one end is effected by means of suitable tackle, and the revolutions of the mould immediately commence. By the time all the metal is introduced, the mould is elevated to its true position, the gravitation having carried the fused metal to the end of the mould, and it suddenly revolves for about half a minute with considerable velocity distributing the metal equally to the surface throughout the entire length of the mould from the centrifugal force of the revolution. The vacancy in the centre is of course regulated by the amount of metal, the pipe being made of any degree of thickness required.

In a few seconds the revolution ceases, the mould is separated, the upper half is hoisted off, and the pipe removed. There is no adhesion; the pipe in the instant of cooling undergoing contraction sufficient to obviate this, were there no artificial protection against it. The time occupied from the tapping of the furnace to the lifting of the perfect pipe from the mould, precisely two minutes. And it is obvious that with a range of two or three moulds in operation, pipe could be turned out as rapidly as the metal could be drawn from the furnace. The invention will not be confined to the mere casting of iron pipe. It is evidently applicable in various departments throughout the whole range of the mechanic arts. It is not limited in its effects either, as we understand it, to a mere surface, but while retaining a circular form, it will adapt itself to every variety of external shape and ornament. It is impossible to foresee the wide range of service to which the principle may be adapted; for susceptible as it is of application for the casting of iron pipe thin as sheet iron, and adapted for stove pipe, on the other hand it may be applied to the most colossal cylindrical work that art and science may require, multiplying it to any extent, immensely reducing the cost. Of the general pecuniary effect upon hollow cast-iron, there is ground to anticipate from the use of this principle, an ultimate great depreciation of cost.—*Farmer and Mechanic.*

Valuable Discovery.—Among the valuable and wonderful discoveries made by Mr. Layard in the ruins of Nineveh, he exhumed some splendid works of art carved in ivory. When the ivory arrived in England, it was discovered that it would crumble to pieces, and fall into dust. Professor Owen attributed the cause of decay to the departure of the albumen from the ivory, and recommended the article to be boiled in an albumen solution. The experiment was tried with the most happy results. The old ivory has been thereby rendered as firm and solid as when it was entombed, and the probability is, that these splendid works of ancient Assyrian civilization will astonish future generations a thousand years hence.—*Farmer and Mechanic.*

Electro-Magnetic Power.—We learn that Professor Page, who recently obtained from Congress an appropriation of \$20,000 to enable him to continue his experiments in testing, in Washington City, the applicability of the electro-magnetic power to machinery, has constructed an engine by which a cylinder printing-press is driven as well as if steam was the moving power. It is thought, however by those who have witnessed the experiments of Professor Page, that though the power which he has arranged will answer very well in cases where motive power is only wanted in small quantities and on rapid calls, it never can come in competition with steam as a propelling power, for boats, cars, &c., &c. Others look to the experiments now in progress for more satisfactory results.

At a recent lecture at Washington, Professor P. exhibited his trip-hammer, in which he raised up and suspended an immense bar of iron, weighing 50 pounds, which produced a jarring of the whole room as it fell. Heavy blows were made in rapid succession, but the motions of the bar were so easily controlled that it was laid down slowly or rapidly at pleasure.

Improved Method of Preserving Milk.—We learn from the *Chemical Gazette*, that F. H. S. Louis has patented an improved method of preserving milk. The milk is to be mixed with well clarified raw sugar, 4 oz to the gallon. It is then to be evaporated with agitation; when nearly solid it must be pressed into cakes of suitable size.

Steam may be used for the evaporation or if time is no object, spontaneous evaporation in very shallow pans, with the fluid not more than one-tenth of an inch in depth, or a drying chamber may be used, the temperature not to exceed 122 degrees Fah.

The cakes remain sweet and fresh for a long time and are soluble in warm water.

Important Discovery.—Mr. W. Meryman, of Springfield, Illinois, has invented a process by which butter may be packed and kept for any necessary length of time in any climate, and under any circumstances in a state perfectly sweet, without salt or any chemical agent.

GENERAL INTELLIGENCE.

Major General Wm. Worth died recently of cholera at San Antonio, Texas.

The enterprising capitalists of Boston are moving on the subject of a railroad from St. Louis to San Francisco.

An evening train of passenger cars has been put upon the Central Rail Road, so that there are now two trains a day each way.

Bishop Doane, of New Jersey, has failed for a quarter of a million, while his effects are but trifling in comparison.

The new steam ferry boat plying across the river between Detroit and Windsor, burst her boiler on Wednesday last: master builder and engineer killed.

The Steamer Empire on the Hudson river was run into by the Noah Brown and sunk. Loss of life not known. Eleven dead bodies had been recovered and thirty were known to be missing. Some estimates place the loss of life at 100.

Reports have reached St. Louis from the Plains, which state that many of the California emigrants are dying on the way, principally by cholera. The number of deaths in that city, for the week ending yesterday (14th of May) was 273, of which 193 were by cholera, and the disease is increasing.

Calamities by fire and flood.—All the business part of St. Louis, including three quarters of a mile on the river, and three squares back, together with 23 steamboats and some other shipping has been destroyed by fire. Loss five millions. All the business portion of Watertown, N. Y. including three banking houses, three printing offices the post office, mails and all, together with thirty stores, has also been consumed by fire. Loss \$250,000. There has also been a great fire at Milwaukee—loss \$70,000. Also a large fire at Chicago.

The embankments of the Mississippi have broken away, and that mighty river is pouring its waters through the streets of New Orleans. The waters were still rising at the last accounts, and fears were entertained, that the river would force a new channel through the heart of the city.

Philanthropy.—Gerrit Smith is making arrangements to present deeds of land, generally from 30 to 40, acres together with \$10 in money, each, to one thousand poor and landless white persons, apportioned among the counties of the State of New York.

Late Foreign News.—In Germany, the disturbances increase in virulence. The people of Saxony have had a fight with government soldiers in which the former were victorious. The interference of Russian soldiers restored a temporary quiet. Hostilities recommenced the following day, and at the latest accounts, a bloody contest was going on. At Dresden, Leipzig, and Breslau, disturbances had broken out between the people and the soldiers.

The Hungarians had been successful in their battles with the Austrians. They had taken Brans and Beysuro, and were

animated with hope. Their enthusiasm was so great that they were ready to meet the combined forces of Austria and Russia.

The French have met with a check in their way through the Papal States. In their way march from Shechid to Rome, the opposition shown to them was greater than they expected. The people at Rome protested against permitting the French to enter the city, threatening destruction to St. Peters church if they were. The French General replied that his orders were imperative, and that he would enter the city at all hazards. He commenced his march, entered the city, and received a volley of musketry and missiles which caused him to retreat, with 200 killed and 500 wounded.

English accounts say the French did not enter the city, but were whipped at the gate with 600 killed. General Oudinot was taken prisoner, (not shot,) but was afterwards rescued with great difficulty.

DETROIT PRICE CURRENT.

Flour, bbl.	3 62	\$3 75	Salt,	\$1 31	
Corn, bus.		35	Butter,		11 1/2
Oats,		27	Eggs, doz.		8
Rye,		34	Hides, lb.		3a6 1/2
Barley,		56	Wheat, bus.		70
Hogs, 100 lbs	3 50	a4 25	Hams, lb.		6a7
Apples, bush		1,00	Onions, bu.		50a63
Potatoes,		62	Cranberries,		1 75
Hay, ton,	8 00	a10 00	Buckwheat 100lbs.		1 50
Wool, lb.		14a28	Indian meal,		75
Peas, bu,		1,00	Beef, do	2 00	a2 50
Beans,		1,00	lard, lb. retail,		7
Beef, bbl.	6 00	a7 00	Honey,		10
Pork,	10 50	a11 50	Apples, dried,		75
White fish,	6 00	a6 50	Peaches, do		2 00
Trout,	5 50	a6 50	Clover seed, bu.		4 50
Cod fish, lb.		5a5 1/2	Herd's grass do		1 00
Cheese,		a7	Flax do		75
Wood, cord	2 a	25	Lime, " bbl		75

AGRICULTURAL IMPLEMENTS.—Plows, harrows, hay, straw and manure forks, shovels and spades, hoes, hay and horse rakes, grain and grass scythes, snaths and cradles, road scrapers, corn shellers, hay and straw cutters, corn and cob crushers, sugar mills, pruning and garden tools, churns, well wheels, corn knives, flails, saws, axes, &c. &c. of the best manufactures, just received and for sale wholesale or retail, at the agricultural warehouse and seed store, by

SPRAGUE & Co.
June 1, 1849. 30 Woodward Ave.

GARDEN SEEDS.

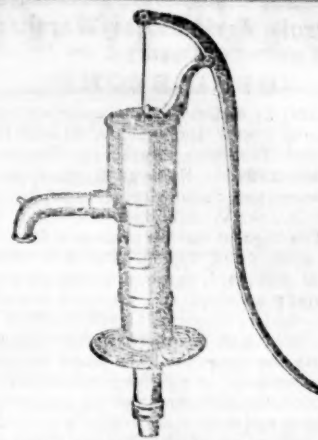
A Fresh and general assortment of warranted garden seeds for sale by the package or paper, at the agricultural warehouse and seed store, by

SPRAGUE & Co.
June 1, 1849. 30 Woodward Ave.

FARM FOR SALE.

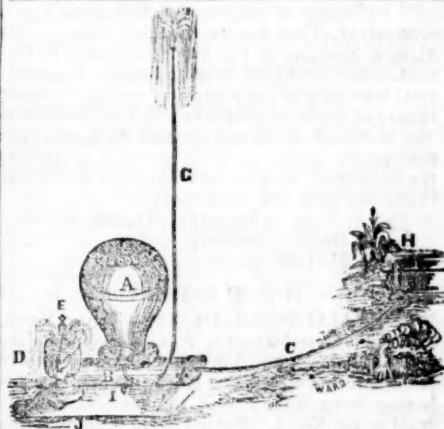
SITUATED on Grand River, four miles below Grand Rapids, on the road leading to Grandville, consisting of 202 acres, 130 of which is opening land and under a high state of cultivation, the remainder is interval bottom land and timbered. On it is an orchard of bearing apple trees of choice cultivated fruit, with a large and well finished dwelling house, carriage house, barns, sheds, and in fact, all the buildings necessary to the convenience of the farm. The farm is well watered with running living water, the location pleasant and healthy, the soil productive and easily cultivated, and as a grain farm, there are but few in this or any other country that excel it. The terms will be such as to render it an inducement to any person wishing to purchase. One-third or half of the purchase money can, if desired, remain on bond and mortgage for a term of years.

J. F. CHUBB.
Grand Rapids, Kent Co. Mich. May, 1849.



PATENT PREMIUM PUMPS.—The subscribers have just received an assortment of these celebrated pumps for wells and cisterns. For sale at the agricultural warehouse and seed store, by

SPRAGUE & Co.
June 1, 1849. 30 Woodward Ave.



WATER RAMS of the most approved construction, for sale low at the agricultural warehouse and seed store by Sprague & Co. 30 Woodward Avenue.
June 1, 1849.

THERMOMETRIC CHURN.—The subscriber, having purchased the right to make, vend and use the Thermometric Churn, (of which A. & W. A. Crowell are the inventors and patentees,) in the counties of Wayne, Oakland, Washtenaw and Monroe, Michigan, is intending to commence the manufacture of them soon, and will be able to supply all who may desire to avail themselves of the benefits of an improvement, which is fast working a revolution in butter-making throughout the country.

WILLIAM H. HANFORD.
Canton, Wayne Co., Mich. May 13.

REAL ESTATE AGENCY,

DETROIT AND LANSING, Michigan.

THE undersigned have unequalled facilities for the purchase and sale of Real Estate, the payment of Taxes, reclaiming Lands sold for Taxes, the purchase of Lands at Tax Sales, the examination of Titles, the Entry of State or Government Lands, the examination and platting of Lands, leasing city and village property, and collecting Bonds, Mortgages, and other evidences of debt; the purchase and sale of Michigan State Liabilities, &c.

They have careful and trustworthy Agents at the principal places in Ohio, Indiana, Illinois, Wisconsin, and Iowa, and in each of the organized Counties of this State, and have also township plats of nearly all the towns of the State.

May 13, 1849. MACY & DRIGGS.

MILL, PLATFORM, AND COUNTER

Scales Warranted, any size and pattern, for sale by

SPRAGUE & CO.,

Agents for the Manufacturer.

No. 30 Woodward Ave., corner Woodbridge street.

TUBS, PAILS, AND CHURNS For Sale by

SPRAGUE & CO.,

Agents for the Manufacturers.

No. 30 Woodward Avenue, corner Woodbridge street.

Detroit Seed Store.

F. E. Parker and Brother offer for sale a full assortment of Garden, Field and Flower Seeds and Agricultural Implements, Ploughs, Corn Shellers, Seed Plants, Straw Cutters, &c. &c.

F. F. PARKER & BRO
Jan. 1 Agents, Genesee Seed Store.

Detroit Agricultural Warehouse AND SEED STORE.

SPRAGUE & Co. dealers in Agricultural and Horticultural Implements, Horse Powers, Smut and Threshing Machines, Flower, Field and Garden Seeds, Bulbous Roots of all kinds, Fruit trees and Shrubbery, No. 30, Woodward Avenue, corner Woodbridge-st. Detroit, Mich.

The highest market price paid for grass and clover seed, dried apples, &c. &c. Consignments of pork, lard, butter, and produce generally respectfully solicited and promptly attended to. Country dealers supplied at manufacturers' prices. All orders by mail or otherwise faithfully executed. Our assortment will be found on examination, to comprise *every thing* wanted for use by the farmer, the dairyman and the gardener.

Farmers and dealers are cordially invited to call and examine our stock after the 20th of April, when we shall open the establishment. Any thing not comprised in our catalogue, which is called for, will be promptly furnished without any additional expense to the purchaser.

Resolution

Passed unanimously by the "State Agricultural Society" of the State of Michigan:

Resolved, That we are gratified to learn that Messrs. Sprague & Co. are establishing in Detroit, a warehouse for keeping improved agricultural machines and implements, and the choicest variety of seeds for gardens and farms, adapted to the wants of the people of this state, and hope that people living in Michigan will appreciate the benefits of such an establishment within our limits, and give it their patronage.

EPIPHRO. RANSOM, Pres't.

A. W. HOVEY, Secretary.
March 24, 1849.

PETERS'

BUFFALO WOOL DEPOT—THIRD YEAR.
I have established a Wool Depot upon the following plan. 1st. The wool is thrown into 10 sorts; Merino wool being No. 1, the grades numbering down from 1 to 5; the coarsest common wool being No. 5. Saxony wool is thrown into extra, and prime 1 and prime 2. Combing and De Laines make 2 sorts more. 2nd—I charge for receiving, sorting and selling, *one cent per pound*; this includes all charges at the Depot, except insurance. 3rd—Sales are made for cash, except when otherwise directed by the owner.

All wool consigned to me should be marked with the owner's name. Warehouse, corner of Washington and Exchange streets.

Buffalo, Jan. 1, 1849. T. C. PETERS.

Great Northern Route

BETWEEN THE EAST AND THE WEST.

BY WAY OF THE MICHIGAN CENTRAL RAILROAD,

Will commence operation on the opening of navigation, by which passengers will be taken between Chicago and Buffalo, in from 30 to 45 hours, and to New York in from 55 to 70 hours, shortening the time between Chicago and Buffalo to less than one-third that of any other route.

A Steamboat will leave Milwaukee every morning, and Chicago every morning and evening for New Buffalo, (the western terminus of the Railroad,) which with the Cars to Detroit, and Steamboats to Buffalo, will form two daily lines from Chicago to Buffalo, connecting directly with the Cars from Buffalo to Albany, and Steamboats to New York, or Cars to Boston.

Going west, a Steamboat will leave Buffalo every morning and evening, running from the Cars of the Albany and Buffalo Railroad, for Detroit, thence by Railroad to New Buffalo, and by Steamboat from the morning train at New Buffalo to Milwaukee and other ports, and from both trains to Chicago, connecting with the line of large Packets on the Illinois and Michigan Canal to La Salle, thence by the Express line of first class river Steamboats to St. Louis, and by the lower river Steamboats to towans on the Mississippi, and New Orleans. J. W. BROOKS, Sup't Michigan Central Railroad.

Detroit Seed Store, AND AGRICULTURAL WAREHOUSE.

ESTABLISHED 1816.

F. F. PARKER & BROTHER have for sale an assortment of Agricultural Implements, Ploughs, Corn Cultivators, Seed Planters, Straw Cutters, Corn Shellers, &c., and will receive a large addition to their present stock on the opening of navigation.

Garden, Field, and Flower seeds, English and American, in packages and small papers, put up at the Genesee Seed Store, Rochester, warranted genuine and fresh.

April 15, 1849. F. F. PARKER & BRO.

Grosse Isle Institute, FOR THE EDUCATION OF BOYS.

REV. M. H. HUNTER, an Alumnus of Yale College, Principal.

This is a Select School in which boys are taught all the usual branches of a liberal education, including the classics, mathematics, &c.

The School year consists of three terms, the first extending from the 1st of September to Christmas; the second from the first of January to the first of April; and the third from the 1st of May to the 1st of August.

TERMS.—For tuition, board, &c., \$150 per year, in advance, as follows: 1st term, \$58; 2d term, \$46; 3d term, 46.

REFERENCES.—Rt. Rev. S. A. McCoskry, D. D., and Hon. Elon Farnsworth, Ex-Chancellor of Michigan, Detroit.

For fuller information see Circular.

April 1st, 1849.

SEEDS, GARDEN AND FIELD, Warranted fresh, for sale by the pound or paper, by
april 23 **SPRAGUE & CO.,**
No. 30 Woodward Ave., corner Woodbridge street.

New Publishing House, AND WHOLESALE BOOK & STATIONERY STORE

THE undersigned begs to inform book buyers, book sellers, teachers and dealers in books, stationery, and paper hangings, borders, fireboard views and window paper, that they have this day opened an extensive Book, Stationery and Paper Hanging Establishment, which comprises a general assortment of books in the various departments of literature, and where a full stock of school and classical books, (in general use) LAW, MEDICAL and THEOLOGICAL WORKS, Miscellaneous Books and Paper Hangings, in great varieties, can be had at eastern prices.

Their facilities as publishers enable them to offer books on as reasonable terms as any of the eastern houses. Orders from the country respectfully solicited and promptly attended to. Citizens and the public generally are invited to call and examine our stock, as we feel confident inducements are offered to purchasers rarely met.

F. P. MARKHAM, 170, Jefferson Avenue, Detroit.

Michigan Book Store.

C. MORSE & SON, wholesale and retail dealers in BOOKS and STATIONARY, continue business at the old stand, on Jefferson Avenue, Detroit. They respectfully invite Country Merchants and Teachers, to their extensive stock of SCHOOL and CLASSICAL BOOKS, embracing every kind in use. Their assortment of Miscellaneous Books is very large, and in good bindings, from which a better selection can be made for townships and family libraries, than at any other establishment.

They also keep on hand, all kinds of English and American STATIONARY; fine Foolscap and Letter Paper; Printing Paper, (superior quality); Printing Ink, Wrapping Paper, &c. &c. Also, Medical and Law Books.
Jan. 15, 1849

WHOLESALE & RETAIL.

ALEX. M'FARREN, Bookseller and Stationer, 137 Jefferson Avenue, (Smart's Block,) Detroit, keeps constantly for sale a complete assortment of Miscellaneous, School and Classical Books; Letter and Cap paper, plain and ruled; Quills, Ink, Sealing wax, Cutlery, Wrapping paper, Printing paper of all sizes; and Book, News and Cannister Ink of various kinds; Blank books, full and half bound, of every variety of ruling; Memorandum Books, &c. To Merchants, Teachers and others buying in quantities, a large discount made. Sabbath School and Bible Society Depository.
Jan. 1.

Ready Made Clothing.

THE Subscribers are now prepared to offer at their well known "Emporium," one of the largest and most complete assortments of Ready Made Clothing ever offered in this city. Being manufactured under their own immediate inspection, they can warrant it of the best material, workmanship and style. Their goods having been recently purchased at the unprecedented low prices at which goods are now selling in the New York and Boston markets, they are consequently enabled to offer all descriptions of garments *most astonishingly low*. Among their stock may be found: Broadcloth Coats; Cloth, Cassimere, Tweed and Blanket Overcoats; Cloth, Cassimere and Tweed Frocks, Dress and Sack Coats. All descriptions, qualities, and styles of Cloth, Cassimere, Prince Albert Cord, Tweed and Satinette Pantalons, Satin, Velvet, Cashmere, Silk and Cassimere Vests. Goodyear's India Rubber Goods, in all their varieties, together with a large stock of Shirts, Drawers, Stocks, Cravats, and Hosiery, of all descriptions.

Persons in want of any description of Gentleman's wearing apparel, will find it to their advantage to call before making their purchases, as they are determined to sell both at Wholesale and Retail, at prices which cannot fail to give satisfaction. Call and satisfy yourselves, at the old store, corner of Jefferson and Woodward avenues.
Jan. 1. HALLOCK & RAYMOND.

DRY GOODS AND GROCERIES, CHEAP FOR CASH.

WE have constantly on hand one of the largest and best stocks of Goods in Detroit. Thankful for the very liberal patronage of our friends, we solicit its continuance, assuring them that we will make it for their interest to call and see us. We have constantly on hand a supply of good Groceries for family use, and as we sell for cash, it enables us to offer either Dry Goods or Groceries, at the lowest possible price. Our 4s. 6d Tea is too well known to require further comment. We will only say, beware of a spurious article, that many will attempt to palm off.

HOLMES & BARCOCK,
Woodward Avenue.

THE Very best assortment of DRY GOODS, BONNETS & RIBBONS, Groceries, Paper Hangings and Window Shades may be found at Wholesale or Retail, at

JAMES A. HICKS.

130 JEFFERSON AVENUE, DETROIT.

At prices that will defy competition. A general assortment of housekeeper's articles, consisting in part of Carpets, Feathers, Marseilles Quilts, Blankets, &c., always on hand. Tea and Coffee drinkers are particularly invited to examine his 4s Young Hyson and Gunpowder tea, and his Coffee and Sugar, for he feels confident they will pronounce these articles the best in the market for the price.

TO THE PUBLIC.

I am back again from the East, and have up my old Sign, "New York Dye-House," Woodward Avenue, next to W. K. Coyle's store, and opposite the old Depot. I am fully prepared, as heretofore, to

DYE SILK, WOOLLEN AND COTTON.

Merino Shawls cleaned and dyed; Moreen Curtains, white Kid Gloves, Carpets, &c., &c. cleaned. Gentlemen's faded clothes cleaned and dyed in Eastern style, and Woolen Yarn dyed to any pattern.
Detroit, Jan. 1, 1849.

H. A. YOUNG.

DYEING & SCOURING.—The subscriber, having opened a dyeing establishment North side of Jefferson Avenue, (corner of Jefferson Avenue and Shelby Street,) nearly opposite the Michigan Exchange, is prepared to execute orders of every description in his line of business, and in a style which has never been surpassed in the Western country. Shawls, Scarfs, Merinoes, China crapes, and every species of foreign fabric, dyed and finished in the best style. Moreens and Damask curtains, dyed and watered. Gentlemen's wearing apparel scoured, and the colors renovated or dyed, without taking the garment apart.
M. CHAPPELL.

DETROIT, Oct. 7, 1848.

TERMS.—The MICHIGAN FARMER is published twice a month, by WARREN ISHAM, at one dollar a year in advance; after three months, \$1.25; after six months, \$1.50; after nine months, \$1.75. No subscription taken for less than one year, nor discontinued till all arrearages are paid. To clubs, five copies for four dollars.

Office on King's corner, third story.

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BOOK AND JOB PRINTERS,
Corner of Jefferson and Woodward Avenues,
DETROIT.